STATUS OF CLAIMS

Claims 1-17 are presently pending, claim 1 being the sole independent claim. Claims 18-34 were cancelled in a previous amendment.

REMARKS

Claim Objections

Claim 13 is objected to due to a typographical error in the claim dependency, which has been corrected by the amendment made herein.

Rejection Under 35 U.S.C. §103(a)

Claims 1-8, 11 and 14-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cameron et al. (U.S. Pat. Pub. No. 2005/00208206 A1, "Cameron") in view of Chen et al. (U.S. Patent No. 5,917,830, "Chen").

Claims 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cameron in view of Chen, and further in view of Takahashi (U.S. Patent No. 6,633,592, "Takahashi").

Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Cameron in view of Chen, and further in view of Rosen et al. (U.S. Patent No. 5,745,767, "Rosen").

Claim 13 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Cameron in view of Chen and Rosen, and further in view of Klein (U.S. Patent No. 6,185,590, "Klein").

These rejections are hereby traversed for at least the following reasons.

Turning to the claims, claim 1 sets forth a method in which multiple virtual streams carrying multicast addresses are created in a single downstream service. The single downstream service uses a single packet identifier (PID). This claimed combination of PIDs and multicast addresses within the PIDs allows for a two tier distribution system and a sharing of PIDS. Thus, multiple files can be distributed using fewer PIDs than in a system that uses only PIDs to distribute files.

Cameron teaches a video service that distributes video to customers. The video is distributed using multicast addressing. The Examiner asserts that the delivery of a single service

using multicasting corresponds to the claimed creation of multiple virtual streams because in Cameron each customer receives what appears to be its own stream of data. As the Examiner recognizes, Cameron does not disclose that the virtual streams are associated with a single PID.

Chen relates to the digital transmission of video that complies with the MPEG-2 standard. Chen notes that in MPEG-2 transport streams, a PID is used in the header of the packets to identify packets carrying a specific service component, which is simply a conventional use of PIDs in the MPEG-2 standard (see column 14, lines 57-61 of Chen).

In combining the Cameron and Chen references, the Examiner has stated that "it would have been obvious to one of ordinary skill the art at the time the invention was made to modify the system disclosed by Cameron to have the single downstream service use a single PID, as taught by Chen, in order to enable receivers to easily identify packets carrying specific service components." (see page 4 of the Outstanding Office Action). Applicants respectfully submit that the Examiner's reason for combining the references is based on the improper use of hindsight.

Cameron uses a multicasting technique to transport and receive different services. How and why would Cameron employ, in addition to multicasting, a PID to help receivers identify services (except of course, to process an MPEG stream in the conventional manner)? The Examiner asserts that such a use of PIDs would make it easier for the receivers to identify packets. How so? On the face of it, such use of both multicasting and a PID in this manner would appear at best to only lead to redundancies when identifying packets. Applicants thus fail to see any reason in the prior art to form the combination proposed by the Examiner. Indeed, only applicants' specification provides any reason to form such a combination. Namely, only the present invention recognizes that the combination of PIDs and multicast addresses within the PIDs allows multiple files to be distributed using fewer PIDs than in a system that use only PIDs to distribute files. Only with the improper use of hindsight is there any reason to combine Cameron with Chen in the manner proposed by the Examiner. Such improper use of hindsight has been repeatedly prohibited by the Federal Circuit, as noted in MPEP 706.02(j) ("The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Furthermore, as the MPEP notes in section 2141, the Supreme Court has recently emphasized in *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007) "the need for caution in granting a patent based on the combination of elements found in the prior art,"*Id.* at ___, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. Significantly, the court reaffirmed principles that when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious. Id. at ___, 82 USPQ2d at 1395-96. Such a careful analysis in the present circumstances clearly demonstrates that a conclusion of obviousness is unwarranted.

In particular, a PID is being used in the claimed invention to perform a *different* function than it has been known to perform. Specifically, a PID is assigned to a virtual stream carrying multicast addresses to provide another level of filtering so that set top terminals in a network may access application data files beyond that enabled by PID filtering. In addition, the claimed invention does yield more advantages than the prior art would expect from such an arrangement. For instance, as noted at column 8 of Applicants' specification, the use of multiple virtual streams in a single PID reduce channel map configuration requirement and lower the hardware requirements and overhead associated with PID remapping and remultiplexing. In addition, the virtual streams allow MSOs to bypass out-of-band service limitations in the network as well as PID filter limitations in the set-top terminal. None of these advantages are recognized in the prior art. Thus, the claimed invention is *not* simply a rearrangement of old elements that each perform their conventional function and, moreover, the claimed invention *does* yield advantages not recognized by the prior art.

Finally, not only does Cameron fail to show the association of a single PID with multiple virtual streams, but Cameron even teaches away from such an association. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be . . . led in a direction divergent from the path that was taken by the applicant." *In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006) (quoting *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994)). Cameron teaches away because Cameron's multicasting technique is by itself fully satisfactory to transport and receive different services.

Accordingly, for at least the reasons presented above, the rejection of claims 1-17 and the claims that depend therefrom under 35 U.S.C. 103 should be reconsidered and withdrawn.

CONCLUSION

Applicant respectfully submits that all pending claims are in condition for allowance, early notification of which is earnestly solicited. Should the Examiner be of the view that an interview would expedite the application at large, request is made that the Examiner telephone the undersigned attorney at (908) 518-7700 in order to resolve any outstanding issues.

FEES

The Office is authorized to charge any fees required to deposit account number 50-1047.

Respectfully submitted,

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